EGLIN'S OTHER WORLD

WILDLIFE FINDS SANCTUARY IN THE MIDDLE OF CHAOS

by Tech. Sgt. Mark Kinkade
photos by Master Sgt. Efrain Gonzalez

When the Marines hit the beach near the test and training range at Eglin Air Force Base, Fla., not much stands in their way. When the Air Force launches a volley of missiles on the testing range, the action is enough to keep even the stoutest battle-tested warrior down and under cover. When the Navy fires a cruise missile into the test range area, not many things can calmly stand by and watch.

Forestry technician David Grimmer uses a spotting scope *to study the nesting habits of the red-cockaded woodpecker. Scientists hope findings from the study will help preserve the woodpecker population currently found at Eglin Air Force Base, Fla.*

But there are exceptions. In the chaos of hardware, munitions and people that routinely bomb, stomp, drive and generally wreak havoc on the test range, a few creatures have found a safe haven. In fact, with the help of Eglin's environmental protection people, hundreds of birds, amphibians and even lichen are flourishing.

It's a balancing act, said Bruce Hagedorn, a biologist with Eglin's environmental directorate. On one side: The mission of testing military munitions and hardware and training people for war. On the other: providing a habitat for a litany of species that otherwise may cease to exist.

Emily Wicke, a field technician, helps excavate a dig site along Eglin's East Bay shoreline. *Archaeologists believe the site is of an ancient human civilization that existed years before people were known to have settled in the area.*

Birds and bombs

The 46th Test Wing manages more than 720 square miles of test range — much of Florida's northwest panhandle region. All the U.S. military services use the range at one time or another for a variety of training needs. Most recently, the Navy and Marines started using Eglin to meet fleet certification training requirements before shipping out to their deployments.

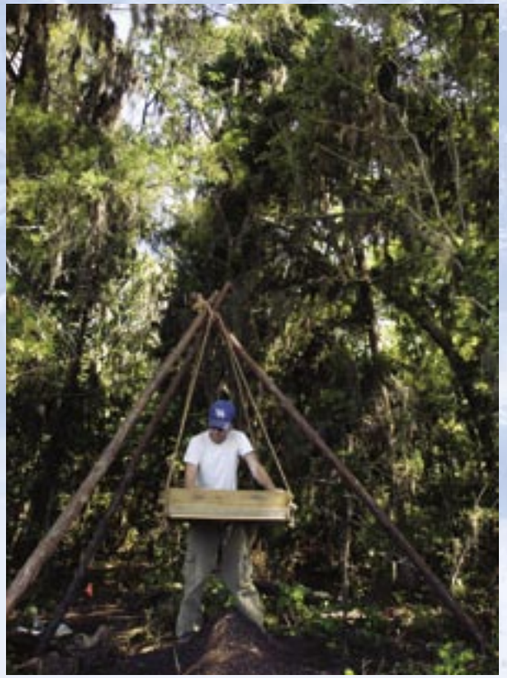
A vast amount of land — and more than 134,000 square miles of air space around the eastern Gulf of Mexico — makes Eglin an ideal place to practice the art of war. If it flies, it probably has cruised over the vast gulf fronting the base. If it blows up, detonates, launches or drops, it has probably done all those things somewhere among the 170 "impact areas" nestled in the alternating thick green pine forests and stretches of Florida savannah on the range.

All that space is also part of a rich ecosystem that is one of the most diverse in North America, said Amanda Stevens, a Colorado State University botanist on temporary duty with the environmental directorate.

"The [Florida] panhandle is a hot-spot of biodiversity," she said. "It's the fifth most diverse habitat in North America, and a lot of that diversity resides on Eglin."

That biodiversity means lots of endangered species call the test range home. From sea turtles nesting on the narrow white stretches of nearby Santa Rosa island, to red-cockaded woodpeckers excavating cavities into longleaf pine trees that flourish in one of the last major stands of longleaf pine on the Gulf coast, the base is host to more than 50 species on Florida's endangered list [see "Eglin's Animal Hosts," page 24].

The state and a host of federal agencies take protecting endangered species seriously, but Eglin has managed to find a steady balance between supporting the mission while enhancing the ecosystem, said Mike Spaits, a spokesman for the environmental directorate.



In the early 1990s, the Department of Defense was looking for a place to base a series of tests aimed at improving rocket and aircraft propulsion. Since test ranges like Eglin make money by "renting" test space to various concerns, the contract would have been beneficial to the base and the Air Force, Mr. Hagedorn said. However, the Jackson Guard raised concerns that no one had considered the impact of the proposed mission on the red cockaded woodpecker. The Air Force decided to avoid possibly endangering the woodpecker's habitat and gave up the mission.

"Since then, we've been much more proactive in how we approach the species and habitats under our protection," Mr. Hagedorn said. "We never want to have someone cite a lack of information about a natural resource as a reason to lose a mission again."

Of birds and Marines

Protecting species at Eglin begins long before a test mission starts, said 1st Lt. James Madeiros, an Eglin public affairs spokesman. The natural resources management team, including the Jackson Guard, keeps extensive information about the species that call Eglin home, and constant monitoring makes sure information is up to date.

When someone wants to use the test range, the environmental people are among the first called to give an opinion on the possible effects the test mission would have on the environment. If the experts think the test might cause problems, their first priority is figuring out how to reduce the threat to the species.

"We're not in the business of swapping our national defense mission for our environmental mission or vice versa," the lieutenant said. "We want to find a way for both elements to work together. And we usually do."

Most recently, Eglin had to protect the woodpecker's natural habitat and still allow the Marines to train throughout the range. The Navy needed a place for Marine expeditionary units to practice

Chad Kinslow, a field technician, sifts through debris hoping to find artifacts or clues *to confirm the possible existence of an ancient human settlement along Eglin's East Bay shoreline. Like wildlife conservation, the Air Force puts heavy emphasis on protecting the history and heritage of the Eglin area.*

Pete Coman, a helicopter manager from Gila National Forest, N.M., uses an all-terrain vehicle outfitted with a burn torch *to set a controlled burn in one of Eglin's training ranges. Prescribed burning is the most effective way to control wildfires caused by live military training ordnance and lightning storms. By burning dry grasses and debris, firefighters destroy the fuel wildfires need to get started.*

Eglin's Animal Hosts

Eglin Air Force Base is home to one of the most diverse ecological habitats in North America. More than 50 species listed on Florida's threatened and endangered species list live on nearly 750 miles of test range that makes up the core of Eglin's test mission. Some of the more prominent species include:

■ **Red-cockaded woodpecker:** Seven inches long, the male woodpecker is distinguished by red plumage on the head. It eats insects that burrow into old-growth pines, and once ranged along the gulf coast from Texas to Florida, and up the Atlantic coast to New Jersey. Logging in the early 20th century reduced the woodpecker's home to a handful of states. The World Wildlife Fund says the woodpecker is currently thriving and abundant, but "prospects for long-term survival are uncertain." Private landowners are not under any legal requirement to maintain old growth pine forests. Eglin, however, is doing all it can to conserve the woodpecker habitat.

■ **Oskaloosa darter:** The darter, found most often in the thin streams flowing throughout the training area, is a small 2-inch long fish that eats insect larvae. Eglin has historically been the darter's habitat — about 90 percent of the species' known range is on the base — though some are found on private land around the base. Again, there are no restrictions to prevent private land owners from building roads and dams that could endanger the darter. That leaves the Eglin population with the best chance for long-term survival.

■ **Santa Rosa beach mice:** Rare, but not federally protected, these mice once lived in a habitat of nearly 103 coastal miles from Florida to Alabama. Urban growth and development have forced the thinning population to live in a smaller range, including Santa Rosa island.

■ **Gopher tortoise:** Dark brown and between seven and 15 inches long, the gopher tortoise is found in Alabama, Louisiana, Mississippi and Florida. Like the red-cockaded woodpecker, the tortoise likes old-growth long leaf pine forests, a habitat reduced by logging.

■ **Black bear:** Smaller than the more common North American brown bear, the black bear may soon be listed as threatened because of the loss of habitat. The bears are occasionally seen snuffling around family housing areas and other populated places where trash poses a strong temptation. The environmental flight tracks bear spottings to determine if they are migrating away from their homesteads on the training range.

— Tech. Sgt. Mark Kinkade

A red-cockaded woodpecker (left) builds its nest by drilling a round hole with its beak approximately 3 inches in diameter *through the sapwood and into the heart of a tree. The woodpeckers live in small groups in one- to 10-acre areas called clusters, or colonies, and have made training ranges their home. Along the East Bay shoreline (above) archaeologists study a formation of oyster shells hoping to unearth clues to what they think could be a human settlement dating to a time before any known people are thought to have existed in the area. The dig is still in its early stages, but already scientists have found enough artifacts to encourage more extensive digging.*

beach landings and penetrations. Eglin's huge test area and beachfront access from the gulf made the base a natural selection.

But Marines stomping in the pine forests and humvees cruising on dirt roads while bombs explode in the distance don't create a very inviting atmosphere for amorous woodpeckers looking to build homes and reproduce. In fact, it can be downright threatening.

The solution? Tape. Reflective aluminum tape, the type normally seen on highway rail guards.

"We put reflective tape on the trees to mark a 200-foot buffer around what we believe are woodpecker host cavity trees," Mr. Hagedorn said. "Then we told the Marines that whenever they saw that tape, they had to stay at least 200 yards away and couldn't stop in the vicinity for more than two hours. That meant no bivouacking under the trees or idling motors for long durations. And honestly, it didn't seem to bother the Marines. We didn't have any problems."

The Marines also had to deal with rare lichen that grows on the white sands of Santa Rosa island. When Hurricane Opal hit the island in the 1990s, it all but wiped out the population. A small colony survived and has managed to thrive where few people go.

But Santa Rosa Island has long been a prime testing area. The island stretches in front of Eglin's main coastline, meaning the Marines have to cross the narrow island to reach the mainland. Two thousand Marines and a parade of amphibious vehicles can be perilous for tiny lichen clinging for dear life to the white sand.

Again, the Jackson Guard came up with a simple solution: A series of wooden stakes with ribbons used to mark a 100-yard wide corridor across the island. The Marines landed, saw the stakes, and drove between the markers until they hit the water on the other side. Result: No lost lichen, no unhappy Marines.

"[Natural resources management] has to take a lot of concerns into account," Lieutenant Madeiros said. "But they've been remarkably successful balancing things. When you get out on the range, it's sometimes hard to believe we conduct tests out there. They've done a good job of maintaining a natural ecological state, and the success of the wildlife we protect is evidence of that." ✪